School Personnel Knowledge, Behaviors, and Policies Related to Asthma

Results of a survey on the knowledge, behaviors, and policies of school personnel and asthma conducted by the Children and Youth Workgroup of the Indiana Joint Asthma Coalition.

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Table of Contents

Introduction

The purpose of the Indiana Joint Asthma Coalition (InJAC) School Survey (Appendix A) was to determine the baseline knowledge of the asthma burden for Indiana schools, including environmental hazards for asthma. This relates to the *Strategic Plan for Addressing Asthma in Indiana*, specifically the goal to: Increase awareness of the asthma burden among children and youth, their caregivers and their community-based education and regulated early care providers. By determining the existing knowledge level, InJAC and the Children & Youth Workgroup can more appropriately develop training materials that reinforce existing knowledge and fill knowledge gaps identified by the survey.

The four key questions identified by the Children and Youth Workgroup are:

- Do school personnel know all aspects of the impact asthma has on their school setting?
- Do school personnel know the indoor and outdoor environmental triggers of asthma, and measures to remove the triggers?
- Do school personnel know the behavioral effects of asthma, including absenteeism, disruptive effects, and quality of life?
- Have school personnel received any training/education on the physiology of asthma, management and control, and emergency treatment protocol?

Data Collection and Participation

Data was collected from October 18, 2006 to November 17, 2006. The survey was primarily electronic utilizing SurveyMonkey.com. A small number of paper surveys were collected at the 2006 Indiana School Nurse Conference and these surveys were then entered into SurveyMonkey.

The target audience for the survey was superintendents, principals/assistant principals, healthcare personnel, and teachers. To reach this target population, the Children & Youth Workgroup utilized related listservs to email survey links to the target audience. The following listservs were utilized: Indiana Association of School Principals (2270 members, which included principals, assistant principals, and retired members), Indiana Superintendents (290 members of public school corporations), and Department of Education School Nurses (1034 members).

Members were asked to forward the survey to other school personnel, so the exact sample size is unknown. A total of 677 surveys[1] were collected from at least 82 unique counties (Indiana has a total of 92 counties). The breakdown of participants by position, school type, and community are shown below.

[1] Survey Monkey reported 677 total surveys; however some questions show 678 responses.

Position	Number of Participants
Superintendent	46
Principal/assistant principal	178
Corporation school health personnel	118
Building school health personnel	159
Teacher	76
Coach	2
Before/after school leaders	0
Food service	2
Building maintenance	1
Other	96

School Type	Number of Participants
Elementary	304
Middle/Junior High	87
High School	100
All Grades	187

Community	Number of Participants
Rural	320
Suburban	223
Urban	135

Results

Basic Asthma Questions

- The three basic questions regarding asthma (Is asthma: curable, controllable, contagious?) were correctly answered by the majority of participants. Of the three questions, 'Is asthma curable?' was the question most frequently marked incorrect (3.4%) and as 'Don't know' (11.2%). The other two questions were answered correctly by over 99% of participants.

- As for identifying the symptoms/signs of asthma, the symptoms with less than 75% accuracy were: blue nail beds, lips, or extremities; fever; flushed; itchy throat; pale skin; and sweating.

- For identifying conditions that create a potential trigger, the conditions with less than 75% accuracy were: poor sanitation, indoor water puddles, HEPA filters, houseplant's soil, leaking indoor pipes, and vehicle idling.

- For identifying triggers, the triggers with less than 75% accuracy were: medication, cockroach droppings, and food.

Questions relating to Perceived Impact of Asthma

- In response to the question 'Do you believe asthma is a problem in your school?' 49.7% of all participants marked 'No'. Urban school staff (61.5%), middle school and junior high staff (57.5%), and school health care staff (65.1%) were the most likely to believe that asthma was a problem in their school

- Sixty-six percent of all participants do not believe asthma is more disruptive of school routine than other chronic diseases. Urban schools (45.9%), elementary school staff (39.6%), and school health care staff (51.1%) were the most likely to report that asthma was more disruptive of school routine than other chronic diseases.

- Ninety-one percent of all participants believe students with asthma are able to participate in all school activities. This was consistent across rural, suburban, and urban schools. When divided by grade level, the percent of participants that believe students with asthma can participate in all activities ranged from 90.4% (all grades) to 95.4% (middle school and junior high). When divided by position within schools, the range was 82.4% to 93.9%. Among central office administrators, 82.4% believed that students with asthma are able to participate in all activities, followed by 89.9% of teachers and coaches, 92.0% of school office administrators, and 93.9% of school health care staff.

- Almost 37% of all participants think students with asthma do not miss more days than students without asthma. Groups most likely to think that asthma does not affect absenteeism are rural schools (43.8%), high school employees (49.0%), and teachers/coaches (51.9%).

  Do you think students with asthma miss more school days than students without asthma?

	Yes	**No**
Total Participants	63.3%	36.7%
By School Type		
Rural	56.3%	43.8%
Urban	67.4%	32.6%
Suburban	56.3%	43.8%
By Grade Level		
High School	51.0%	49.0%
Middle/Junior High	55.2%	44.8%
Elementary	68.7%	31.4%
All Grades	65.2%	34.8%
By Position		
Teachers and Coaches	48.1%	51.9%
School Office Administrators	54.3%	45.7%
Central Office Administrators	57.7%	42.3%
School Health Care Staff	74.8%	25.2%

Questions relating to Policies/Procedures/Actions

- The majority of all participants indicated they were informed if a student has asthma by a parent (83.9%). This was followed by student (67.1%), doctor's note (64%), school form (62.5%), school health personnel (53%), and not informed until child has symptoms (19.6%). Almost 7% of participants indicated that this question was not applicable as they do not work at a location where children are present. Participants were instructed to mark all answers that applied. Among participants that work at a location where children are present, 88.6% indicated being informed by more than one method.

- Suburban schools were most likely to report obtaining (38.7%) and using (40.1%) Asthma Action Plans/Individualized Health Plans [Plans]. Suburban schools were followed by rural schools (31.3% obtain and 32.8% use) and urban schools (26.7% obtain and 31.1% use). Across all categories, 32.9% of all participants reported obtaining Plans and 35.1% reported using Plans.

- In response to the question 'If a student has trouble breathing what do you usually do?' the following responses were provided: Follow the child's Asthma Action Plan (62.8%); Administer inhaler to child (62.5%); Contact child's parent (60.1%); Send to school health personnel (52.4%); Let child self-medicate (36%); Call 911 (18.6%); Send to principal's office (8%); Contact child's doctor (7.4%). Participants were instructed to mark all answers that applied. Additionally, 7.5% reported that this was not applicable to them because they did not work where children were present.

- When asked 'If you know a child has asthma in your school, would you consider making changes such as removing the student from the program or changing the cleaning procedures in the room in any of these programs (Art Class, Physical Education, and Science Class)?' overall results showed that 79% would consider making changes for each of the three classes. When divided by urban, rural, and suburban schools, no major differences were observed. When divided by grade level, participants that worked with all grades and participants that worked with middle school and junior high students were the most likely to report considering making changes. When divided by main position within the school, central office administrators were most likely to report they would consider making changes (91.8%+ across all 3 classes). School office administrators were the next most likely to report considering making changes (83.9-86.9% across all 3 classes), followed by school health care staff (72.2%-76.7% across all 3 classes). Teachers and coaches were least likely to consider making changes (65.8-70.9% across all 3 classes).

- Out of all survey participants, only 18.7% have attended an asthma education program in the last 12 months. Groups least likely to have attended an asthma training program in the last 12 months were rural schools (16.3%), high school employees (11.0%), and teachers/coaches (1.3%).

Have you attended an asthma education program in the last 12 months?

	Yes	No
Total Participants	18.7%	81.3%
By School Type		
Rural	16.3%	83.8%
Suburban	19.4%	80.6%
Urban	23.7%	76.3%
By Grade Level		
High School	11.0%	89.0%
Middle/Junior High	14.9%	85.1%
Elementary	18.5%	81.5%
All Grades	25.1%	74.9%
By Position		
Teachers and Coaches	1.3%	98.7%
School Office Administrators	4.0%	96.0%
Central Office Administrators	4.7%	95.3%
School Health Care Staff	36.9%	63.1%

- Out of all participants, 71.2% report having a staff member who knows what to do when a child has an asthma attack all of the time, 24.5% report some of the time, 1% report none of the time and 3.2% don't know. Suburban schools were most likely to report having someone available all of the time (80.6%), followed by rural schools (67.8%) and urban schools (63.7%). Across grade levels, high school and middle school/junior high schools were most likely to report having someone available all of the time (74.7% and 74.0%, respectively), followed by elementary schools (71.6%) and all grades (67.4%). When divided by main position within the school, school health care staff were most likely to report having someone available all of the time (79.0%), followed by central office administrators (68.2%), school office administrators (64.3%), and teachers and coaches (62.0%).

- Emergency asthma inhalers were most frequently reported being available in the nurse's office (64.7%), followed by carried by the student (23.5%) and with the teacher (1%) among all participants. Also, 4.7% of all participants did not know the answer to this question and 6% reported it was not applicable. Results were fairly consistent when compared against rural, urban, or suburban environments. Across various grade levels, elementary schools were the most likely to report having inhalers in the nurse's office (83.6%) and least likely to have student's carry their own inhalers (9.2%). Older students are more likely to carry inhalers (48% in high schools and 39.1% in middle schools) and their inhalers are less likely to be in the nurse's office (42% in high schools and 57.5% in middle schools).

Indiana law does allow for the possession and self-administration of medication, including inhalers, if a written statement from a physician verifying instruction on proper self-administration is filed annually with the student's principal (Indiana Code 20-33-8-13 as found in Appendix C).

- The majority of participants (65.2%) reported that their school takes actions to reduce or eliminate allergens and irritants that can make asthma worse while 19.9% reported they did not know and 14.9% reported taking no actions. The results were consistent across school type and grade level; however variations were seen when divided by position within the school. Central office administrators were most likely to report taking actions to reduce or eliminate allergens and irritants (78.8%), followed by school office administrators (73.9%), school health care staff (65.4%), and teachers and coaches (31.7%). The groups that reported taking no action more frequently were also more likely to report that they didn't know if the school was taking action. For example, 41.8% of teachers and coaches reported they did not know if their school took action to reduce or eliminate allergens and irritants.

Qualitative Questions

Two open ended questions were asked at the end of the survey to gather participant feedback on what they would like to learn about asthma and what they thought was important to know about asthma. The responses for both questions were grouped into the following categories: Best Practices for Schools, Causes, Control, Everything, Latest Information, Nothing, Symptoms, Working with Parents and Other. Additionally, a category for Diagnosis was used for the 'Important to Know' question and a category for Prevalence was used for the 'Like to Learn' question. A breakdown showing the percentage of responses for each category and a description of each category are found below.

	Would Like to Learn About Asthma?	**Is Important to Know About Asthma?**
Best Practices for Schools	3.18%	1.72%
Causes	2.89%	1.48%
Control	46.82%	53.20%
Diagnosis	9.83%	6.16%
Everything	0%	3.45%
Latest Information	11.85%	2.46%
Nothing	5.20%	0.74%
Other	10.98%	16.75%
Prevalence	2.02%	0%
Symptoms	3.76%	11.58%
Working with Parents	3.47%	2.46%

- Responses in the ‘Best Practices for Schools’ category included items such as recommended and current policies related to asthma and environmental changes that would reduce the likelihood of attacks.

- Responses to the ‘Causes’ category were somewhat vague and could be interpreted as the cause of the disease or cause of an attack.

- ‘Control’ was the most frequently cited category for both questions, but encompassed several sub-categories such as asthma action plans, controlling triggers and the environment, how to prevent attacks, and how to treat a child that is having an attack.

- ‘Diagnosis’ was only reported in the responses to the ‘important to know’ question and it appears as though school personnel do not necessarily know who in their school or classroom has been diagnosed with asthma.

- Responses categorized as ‘Latest Information’ frequently specified the latest information on medications, however some were more general and simply listed updates on new research related to asthma.

- Several responses in the ‘Prevalence’ category mentioned observations of a recent rise in asthma prevalence and were looking for an explanation.

- Responses categorized as ‘Symptoms’ were sometimes listed as warning signs for identification before an attack.

- Responses in the ‘Working with Parents’ category included educating parents about asthma, encouraging parents to comply with recommended disease management (medication compliance, bringing second inhaler to school, removing environmental triggers in the home, etc), and getting parents to fully communicate with the school about their child’s condition.

- Responses that did not fit into the above categories and were not listed frequently were grouped into the ‘Other’ category. Example responses in the ‘Other’ category included information on the relationship between asthma and allergies, the impacts of asthma on learning, who is most at risk for asthma, and the child’s medical history.

- In addition to the response of ‘Everything’, other responses in this category included items such as ‘yes’, ‘as much as possible’, and ‘all that there is to know’. In addition to the response of ‘Nothing’, other responses in this category indicated that participants were already knowledgeable about the subject.

- Some respondents also asked for the correct answers to the survey questions, which have been included in Appendix B.

Conclusions & Limitations

The following conclusions and recommendations are based off of the collected survey data and are intended to aide the Children & Youth Workgroup in developing training materials and programs for school personnel in Indiana. This section is divided into the four content areas as used above: Basic Asthma Questions, Perceived Impact of Asthma, School Policies/Procedures/Actions Relating to Asthma, and Qualitative Questions. The limitations of each section are also discussed to help illustrate the complete impact of the results.

Basic Asthma Questions

Participants seemed to be aware of basic asthma concepts, however could benefit from reinforcement/clarification on the chronic nature of the disease. School personnel were generally knowledgeable about signs/symptoms of asthma, triggers, and conditions that can create triggers, however, may need reinforcement in this area. The signs/symptoms that received the most inaccurate responses were: blue nail beds, lips, or extremities; fever; flushed; itchy throat; pale skin; and sweating. The triggers that need reinforcement were cockroach droppings, medication and food. Further clarification is also needed around poor sanitation, houseplant's soil, leaking indoor pipes, vehicle idling, and indoor water puddles and their potential to create triggers, as well as the role of HEPA filters.

Perceived Impact of Asthma

In regards to the impact of asthma, reinforcement is needed around the concept that students with asthma are able to participate in all school activities. This is especially needed for central office administrators. There is some limitation around the interpretation of this question as it is unclear whether the belief that students with asthma cannot participate in all school activities is being reinforced by parents or physicians of students with asthma. For example, school personnel may frequently receive doctor's notes and other instructions from parents that instruct the school to not allow their child with asthma to participate in physical education activities.

Additionally, more information needs to be provided to school personnel regarding the impact of asthma on increasing absenteeism, thus disrupting a child's ability to learn. A better understanding of this relationship may motivate school personnel to adopt asthma-friendly school policies. Currently, there is no systematic process (at the State level or among most local school districts) to determine disease prevalence and absenteeism rates among children in Indiana. This lack of data is not specific to asthma, but many chronic diseases. A first step may be to gather asthma prevalence and absenteeism data from a subset of schools and determine a best practice procedure to recommend to all districts/schools in the state.

There were other limitations to the questions targeted at the perceived impact of asthma. Specific conclusions cannot be drawn from the questions 'Do you believe asthma is a problem in your school?' and 'Do you believe that asthma is more disruptive of school routine than other chronic diseases?' The preceding question may have been interpreted differently by individual participants. The word 'problem' may be interpreted as meaning 'existing health condition' or refer to individual students' management of asthma. For the later question, the results indicate asthma is not a disruption. This may be a result of asthma being well-managed by students, the belief that other conditions are more prevalent and therefore more disruptive, or that although asthma is more prevalent other conditions are more disruptive of the school routine. Despite these limitations, it seems appropriate to reinforce the disruption asthma can cause and the importance of controlling the condition.

School Policies/Procedures/Actions Relating to Asthma

Several conclusions can be drawn from the questions relating to school policies, procedures, and actions relating to asthma. The majority of participants indicated they were informed if a student has asthma in some way (by parent, by student, doctor's note, etc.). However, the process seems inconsistent as 88.6% of participants who work in a location where children are present have been informed by more than one method. Further, 19.6% of all respondents indicated that at least once they were not informed of a student's asthma diagnosis until the child had asthma symptoms. School personnel may benefit from a more consistent method of identifying students with asthma, as well as collecting and appropriately distributing information on students with asthma.
Some inconsistent responses were received with regard to Asthma Action Plans/Individualized Health Plans [Plans]. For example more participants reported using a plan than reported obtaining a plan. It appears there is confusion around Asthma Action Plans/Individualized Health Plans. The Plan should be stressed as an important tool during any interventions with school personnel. This was reinforced by the question asking whether or not a staff member who knows what to do when a child has an asthma attack is available full time or not. Overall, 71.2% reported having someone available all of the time. This shows the importance of having a written plan for all students in schools that do not have a staff member available all of the time. Further, these results may be used to advocate for all schools to employ a full-time nurse or health professional.

In terms of controlling triggers, the majority of participants would consider making changes to the environment or removing a student with asthma from art classes, physical education classes, and science classes. An interesting result was that administrators were much more likely to consider making these changes than teachers who would most likely need to initiate the change. To facilitate teachers in this regard, training on specific steps to modify the environment to be more asthma-friendly would most likely be helpful. Also, more extensive training on the requirements to accommodate students with special needs may be necessary.

Overall, it does not appear that asthma-training programs are available or well attended by school personnel. Teachers, who spend the most time with students, were the least likely to have attended a training in the last twelve months. An important next step to make recommendations and plan training events for school personnel may be to determine reasonable timelines for each group to receive training. School personnel should be included in this process as health issues are not usually a primary focus during the limited time available for professional development. Establishing a training schedule that is appropriate, given the primary focus of school personnel to provide quality education, will be critical to administrative buy-in and likelihood of participation in the future. It may also be beneficial to research the possibility of attending professional meetings for school staff as a presenter or exhibitor.

Additionally, one question was asked in regard to the location of inhalers within the school and results found that most were found in the nurse's office. The limitation of this question is that the location of inhalers may be a result of a school policy or the child's/parent's preference. Regardless of the reason behind the location, Indiana law allows students to carry inhalers (if a written statement from a physician verifying instruction on proper self-administration is filed annually with the student's principal) and the importance of allowing students to self-administer their inhalers should be reinforced to school personnel (Appendix C: Indiana Code 20-33-8-13). Research should also be completed to determine the successes and challenges of schools that have fully implemented self-administration procedures.

Data was also gathered on whether or not schools take action to reduce or eliminate allergens and irritants. In the future, it may be beneficial to list out specific actions to measure the prevalence of each action. It is possible participants may not know what qualifies as an action to reduce or eliminate allergens and irritants. Significant differences were seen between the responses of administrators and teachers. It will be important to provide more information on what actions can be taken and who is responsible for those actions. Additionally, school personnel may need to increase communication within the school so that each staff member is aware of the steps currently being taken.

Qualitative Questions

Responses to the qualitative questions reinforce the findings from the other survey questions. Several participants mentioned they would like to learn or thought it was important to know about the asthma basics, such as symptoms and triggers. Participants also frequently listed they would like to know who was diagnosed with asthma, which reinforces the suggestion that schools would benefit from a defined process for identifying children with asthma and disseminating that information to the appropriate school personnel.

The high frequency of participants that wrote they would like to learn what to do if a child has an attack reinforces the finding that schools need more consistency when obtaining and using Asthma Action Plans/Individualized Health Plans. Responses listing

possible changes to the environment to reduce triggers and interest in what can be done at the school level supports the finding that this information needs to be shared with school personnel. The requests for updates on the latest treatments and research on asthma further demonstrate interest in regular trainings on asthma.

New findings from the qualitative questions include the need for information on working with parents of children with asthma and information on the latest medications for asthma. One of the standard survey questions involved the role of parents in asthma care, however focused on the parent providing information to the school on the child's asthma diagnosis. This question did not provide data on disseminating information on asthma to parents or encouraging parents to comply with disease management recommendations. Future trainings should include a component which focuses on how to effectively collaborate with parents of children with asthma to ensure appropriate control of the disease and treatment of attacks. When helping children manage their asthma, a three-way conversation between parents, school staff, and the child's physician would be ideal. Trainings should include collaboration with physicians. It may also be beneficial to gather data from parents of children with asthma and their experiences working with schools on their child's health condition.

Training on the latest medications may be beneficial in helping distinguish between controller and reliever medications and helping students with proper technique when self-administering medication. This information will likely be the most beneficial for school health personnel, however may be important for teachers and coaches as well if students will be self-administering the medication frequently in the classroom.

General Findings

The purpose of this survey was to determine baseline knowledge of school personnel in regards to asthma. Certain sub-groups among school personnel had very low response rates including coaches, before/after school leaders, food service employees, building maintenance employees, and school administrative staff. As these sub-groups are critical to adequate asthma control within schools, additional efforts may be needed to reach these groups.

More appropriate response rates were obtained from other sub-groups and will be used to develop and/or obtain training materials for school personnel. Unfortunately, the survey did not include a question on how personnel would like to receive additional trainings, materials, or other tools associated with asthma. To help gather information on best delivery practices, next steps include looking at published studies on asthma programs for school personnel and collaborate with coalition and workgroup members that work for or closely with Indiana schools.

Results from this survey indicate school personnel do have basic information regarding asthma, but could benefit from additional training on asthma. Trainings should reinforce basics, such as the chronic nature of the disease, signs and symptoms, triggers, and

conditions likely to create triggers. Additionally, trainings should define the impact that asthma has on absenteeism, quality of life, and ultimately the child's ability to learn. Significant time should also be spent on developing or communicating school policies on asthma. This includes policies for informing the school and personnel of an asthma diagnosis, obtaining and using Asthma Action Plans/Individualized Health Plans, procedures for making environmental changes to accommodate students with asthma, and collaborating with parents to maximize the control and treatment of asthma. The availability and delivery of this training would help meet the goal of increasing awareness of the asthma burden and help ensure that students receive adequate care within the school environment.

For additional information or questions, please contact:
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http://www.in.gov/isdh/programs/asthma/publications.htm

Appendix A

Indiana Joint Asthma Coalition School Survey

Exit this survey >>

1. Indiana Joint Asthma Coalition School Survey

Please complete this survey to help the Indiana Joint Asthma Coalition Children and Youth Workgroup assess the burden of asthma in Indiana schools, and develop programs that aim to decrease the burden. The survey asks questions about your knowledge, environment, behaviors, opinions and demographics. Your answers are anonymous, and there is not a wrong or correct answer. If you represent more than one school, please base your answers on your school with the worst health conditions.

Please note that you MUST answer questions with an asterisk (*) to complete the survey.

Thank you for your time today!

*** 1. Is asthma curable?**

- No
- Yes
- Don't know

*** 2. Is asthma controllable?**

- No
- Yes
- Don't know

*** 3. Can you catch asthma from someone else?**

- No
- Yes
- Don't know

*** 4. How are you informed if a student has asthma? (Mark all that apply)**

- [ ] Student
- [ ] Parent
- [ ] Doctor's note
- [ ] School health personnel
- [ ] School form
- [ ] Not informed until a child has asthma symptoms
- [ ] Not applicable. I do not work at a location where children are present.

*** 5. If a student has trouble breathing what do you usually do? (Mark all that apply).**

- [ ] Administer inhaler to child
- [ ] Call 911
- [ ] Contact child's doctor
- [ ] Contact child's parent
- [ ] Follow the child's Asthma Action Plan
- [ ] Let child self-medicate
- [ ] Send to principal's office
- [ ] Send to school health personnel
- [ ] Not applicable. I do not work at a location where children are present.

*** 6. Do you obtain an Asthma Action Plan (or Individualized Health Plan) for all students with asthma?**

- No
- Yes
- Don’t know
- Not applicable. I do not work at a location where children are present.

*** 7. Do you use an Asthma Action Plan (or Individualized Health Plan) for all students with asthma?**

- No
- Yes
- Don’t know
- Not applicable. I do not work at a location where children are present.

*** 8. Where within the school are emergency asthma inhalers for students available?**

- In nurse’s office
- With teacher
- Student carry their own inhalers
- Don’t know
- Not applicable. I do not work at a location where children are present.

*** 9. Does your school have a staff person on-site who knows what to do when a student has an asthma attack ?**

- None of the time
- Some of the time
- All of the time
- Don't know

*** 10. Have you attended an asthma education program in the last 12 months?**

- No
- Yes

*** 11. Which of the following are symptoms/signs of asthma? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Blue nailbeds, lips or extremities			
Abnormal chest movements			
Coughing			
Difficulty breathing			
Exhaustion			
Fever			
Flushed			
Itchy throat			
Pale skin			
Shortness of breath			
Sweating			
Wheezing			

*** 12. Which of the following conditions create a potential trigger/cause for an asthma attack? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Carpet			
Damp indoor environment			
Poor sanitation			
Indoor water puddles			
High Efficiency Particulate Air (HEPA) filter			
Houseplant's soil			
Leaking indoor pipes			
Poor air circulation			
Water damaged ceiling tiles			
Vehicle idling			

*** 13. Which of the following can cause/trigger an asthma attack? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Weed pollen			
Tree pollen			
Grass pollen			
Dust mites			
Animal dander			
Medication			
Mold			
Exercise			
Cockroach droppings			
Tobacco smoke			
Air pollution			
Excessive heat			
Perfume/cologne			
Respiratory Infections			
Food			
Changes in weather			

*** 14. Does your school take actions to reduce or eliminate allergens and irritants that can make asthma worse? (Allergens and irritants include animals with fur or feathers, mold, dust mites, cockroaches, and strong odors or fumes, etc.).**

- No
- Yes
- Don't know

*** 15. Do you believe asthma is a problem in your school?**

- No
- Yes

*** 16. Do you believe asthma is more disruptive of school routine than other chronic diseases?**

- No
- Yes

*** 17. In your opinion, are students with asthma able to participate in all school activities?**

- No
- Yes

*** 18. If you know a child has asthma in your school, would you consider making changes such as removing the student from the program or changing the cleaning procedures in the room in any of these programs? (Check No or Yes for each program).**

	No	Yes
Art class		
Physical education		
Science class		

*** 19. Do you think students with asthma miss more school days than students without asthma?**

- No
- Yes

20. What would you like to learn about asthma?

21. What do you think is important for you to know about asthma?

*** 22. What is your main position within the school?**

- Superintendent
- Principal/assistant principal
- Corporation school health personnel
- Building school health personnel
- Teacher
- Coach
- Before/after school leaders
- Food service
- Building maintenance
- Other (please specify)

*** 23. With what grade level(s) do you work?**

- Elementary
- Middle/Junior
- High
- All of the above

*** 24. In which county do you work?**

*** 25. Is the school you work in rural, suburban or urban?**

- Rural
- Suburban
- Urban

Thank you for completing the survey. If you have any questions or feedback about the survey, please contact Kristin Hobson with the Indiana Joint Asthma Coalition Children and Youth Workgroup at 317-233-7993.

Appendix B

Indiana Joint Asthma Coalition School Survey Answers

*** 1. Is asthma curable?**

- ✓ **No**
- Yes
- Don’t know

*** 2. Is asthma controllable?**

- No
- ✓ **Yes**
- Don’t know

*** 3. Can you catch asthma from someone else?**

- ✓ **No**
- Yes
- Don’t know

*** 11. Which of the following are symptoms/signs of asthma? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Blue nailbeds, lips or extremities	○	✓	○
Abnormal chest movements	○	✓	○
Coughing	○	✓	○
Difficulty breathing	○	✓	○
Exhaustion	○	✓	○
Fever	✓	○	○
Flushed	○	✓	○
Itchy throat	○	✓	○
Pale skin	○	✓	○
Shortness of breath	○	✓	○
Sweating	○	✓	○
Wheezing	○	✓	○

*** 12. Which of the following conditions create a potential trigger/cause for an asthma attack? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Carpet		✓	
Damp indoor environment		✓	
Poor sanitation		✓	
Indoor water puddles		✓	
High Efficiency Particulate Air (HEPA) filter	✓		
Houseplant's soil		✓	
Leaking indoor pipes		✓	
Poor air circulation		✓	
Water damaged ceiling tiles		✓	
Vehicle idling		✓	

*** 13. Which of the following can cause/trigger an asthma attack? (Please mark No, Yes, or Don't Know for each).**

	No	Yes	Don't Know
Weed pollen	○	✓	○
Tree pollen	○	✓	○
Grass pollen	○	✓	○
Dust mites	○	✓	○
Animal dander	○	✓	○
Medication	○	✓	○
Mold	○	✓	○
Exercise	○	✓	○
Cockroach droppings	○	✓	○
Tobacco smoke	○	✓	○
Air pollution	○	✓	○
Excessive heat	○	✓	○
Perfume/cologne	○	✓	○
Respiratory Infections	○	✓	○
Food	○	✓	○
Changes in weather	○	✓	○

Thank you for completing the survey. If you have any questions or feedback about the survey, please contact Kristin Hobson with the Indiana Joint Asthma Coalition Children and Youth Workgroup at 317-233-7993.

Appendix C

Indiana Code 20-33-8-13

Possession and self-administration of medication permitted

Sec. 13. (a) Discipline rules adopted under section 12 of this chapter must provide that a student with a chronic disease or medical condition may possess and self-administer medication for the chronic disease or medical condition during the times and in the places set forth under section 14(b) of this chapter if the following conditions are met:

(1) The student's parent has filed an authorization with the student's principal for the student to possess and self-administer the medication. The authorization must include the statement described in subdivision (2).

(2) A physician states in writing that:

(A) the student has an acute or chronic disease or medical condition for which the physician has prescribed medication;

(B) the student has been instructed in how to self-administer the medication; and

(C) the nature of the disease or medical condition requires emergency administration of the medication.

(b) The authorization and statement described in subsection (a) must be filed annually with the student's principal.

As added by P.L.1-2005, SEC.17.